1.0 PURPOSE AND SCOPE

This guidance document describes the process used to ensure the structural integrity of lifting points. A lifting point is any lifting bail, lifting eye, or other permanently mounted apparatus on cover blocks, cover plates, and shield plugs for lifting. This guidance document also details the responsibilities of and steps to be taken by the engineers involved in this process (see TFC-ENG-FACSUP-C-25).

2.0 IMPLEMENTATION

This guidance document is effective on the date shown in the header.

3.0 RESPONSIBILITIES

The Area Engineer is responsible for the structural integrity of lifting points. The responsibilities of the Area Engineer, except approvals, may be delegated to qualified Support Engineers.

Responsibilities are contained within Section 4.0.

4.0 GUIDANCE

The purpose is to ensure lifting points are tagged and in the lifting point database. Lifting points that do not have tags need to be inspected photographed and analyzed prior to lifting; and tagged after the initial lift is complete.

For newly installed or manufactured lifting points (less than 12 months old) where: (1) calculations meet or exceed the analysis criteria in RPP-8360, showing adequate strength of the lifting points and/or load testing results demonstrate strength in excess of 125% of the load for each lift point; and (2) a QA receipt inspection has been performed, the field inspection requirements, Section 4.1, of this procedure do not apply, and the receipt inspection documentation for the system, structure, or component is substituted for a field inspection per TFC-ENG-FACSUP-C-25. Regardless, Section 4.2 of this procedure shall apply, and photographs are taken and included as input to the Lifting Point Database.

4.1 Inspection Preparation

Area Engineer

1. Based on a scheduled need to perform a lift, check the Integrated Document Management System (IDMS) Lifting Point database or RPP-16330 for existing calculations and field inspections; provide supporting documentation to planner as needed.

2. If the lifting point is not in the Lifting Point database, either fill out the Lifting Point Field Report by Engineer (A-6003-764), photograph the specific lifting point, and go to Section 4.2; or have a QA inspection performed using the Lifting Point Field Inspection Report by QA (A-6003-765).

   QA inspection is required when the lifting point is damaged or visibly bent.

3. Review the field inspection folder for completeness and accuracy, provide signature approval on A-6003-766 in Appendix A, and deliver the package to QA with the instruction to complete the inspection according to TFC-ENG-FACSUP-C-25.

4.2 Field Inspection

Area Engineer

1. Evaluate the field inspection report, and based on findings, perform the required actions to ensure that the identified lifting points can be safely used.

    a. Ensure a work order for any lifting points requiring corrective maintenance is initiated; include appropriate provisions of TFC-ENG-FACSUP-C-23.

    b. Indicate approval by signing the inspection report(s).

    c. Add the field inspection report to the Lifting Point Database.

2. If required, prepare an Engineering Change Notice (ECN) to initiate repairs or to revise drawing(s) to match the "as-found" field conditions in accordance with TFC-ENG-DESIGN-C-06.

Rigging Engineer

3. Evaluate corrective actions and approve ECNs .

4. When frequent lifts are taking place, it is recommended to track hoisting and rigging activities: coordinate calculations, inspection of critical and special lifts required using the Lifting Point Evaluation Tracking List (see Figure 1 for an example of the tracking list).

4.3 Structural Analysis

Support Engineer

1. Perform structural analysis and provide data to planner; engage the services of a structural engineer as necessary.

2. Check the IDMS Lifting Point database and RPP-16330 to determine bail capacity and cover block weight. If necessary, initiate an analysis by contacting the Engineering Discipline Lead - Civil/Structural, and provide an approved inspection report to the analyst.

Engineering Discipline Lead - Civil/Structural Discipline

3. Determine the type of calculation required in accordance with TFC-ENG-DESIGN-C-10. A letter of appointment may be issued to identify approved alternates for this determination.

Analyst

4. Perform structural evaluation of lifting points in accordance with TFC-ENG-DESIGN-C-10, RPP-8360 and RPP-10975.

Area Engineer

5. Based on the structural evaluation, determine if the lifting point(s) is adequate to lift the intended item (e.g., cover block, cover plate, shield plug) and verify tags are in place as in accordance with the requirements of TFC-ENG-FACSUP-C-25..

   a. If adequate, notify the planner and provide the planner with a copy of the analytical calculations.

   b. If inadequate, contact the Engineering Discipline Lead - Civil/ Structural, for a resolution (RPP-9514).

Analyst

6. Record analysis as required by TFC-ENG-DESIGN-C-10. Document computational calculations on A-6003-884, item 5.e.

7. Record inspection report results and analysis into the Integrated Data Management System (IDMS) Lifting Point database.

5.0 RECORDS

The following records are generated by the performance of this procedure:

- Lifting Point Field Inspection Report by Engineer form (A-6003-764)
- Lifting Point Field Inspection Report by QA form (A-6003-765).

The record custodian identified in the Company Level Records Inventory and Disposition Schedules (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

6.0 REFERENCES

1. RPP-10975, “Simplified Lifting Bail Evaluation Process.”

2. RPP-16330, “Standard Lifting Point Rated Load Capacities.”

3. RPP-8360, “Lifting Bail Evaluation Process.”

4. RPP-9514, “Bail Repair and Load Testing.”

5. TFC-ENG-DESIGN-C-06, “Engineering Change Control.”

6. TFC-ENG-DESIGN-C-10, “Engineering Calculations.”

7. TFC-ENG-FACSUP-C-23, “Equipment Identification and Data Management.”

8. TFC-ENG-FACSUP-C-25, “Hoisting and Rigging.”

Figure 1. Lifting Point Evaluation Tracking List.

Item No.	Priority	Lifting Wk Order No.	Location (DSTs)	Critical/Special/ Norma	Lift Description/ Location	Project Need Date	Project	Planner/ Area Engr	Rigging Engr/ Scheduler	Field Pkg Prep for QC Insp (Planner)		Area Eng/QC Inspection		Inspec. Review of QC Inspection (Area Engr.)		Engineering Evaluation		Review of Engineering Eval (Engineering Discipline Lead - Civil/Structural)		Critical Lift Plan- Special Lift (Brewer)		Comments (Issues, ECN #, etc.)
		Shading indicates eval & CLP complete and Wk Pkg is RTW								IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	